

coating is applied to the paper, the paper is conveyed through doctor 32. Doctor blade 32 is pressed against the paper, which is backed by roll 33. Doctor 32 functions to meter or level the coating by brushing or removing some slurry (page 6, lines 16-27). The process gives a smoother surface to the paper than not using the combination of doctor 32 and spraying (page 7, lines 14-19).

Rosenberger et al. disclose a method and apparatus for spraying waterborne coatings under varying conditions (the Fig.) including a method of inline adjustment of waterborne coating compositions held in reservoir 1 to compensate for the relative humidity of the environment in spray zone 13. To compensate for measured humidity in spray zone 13 the apparatus alters the viscosity of the coating composition. The viscosity is altered by adding a viscosity altering additive such as water. Humidity sensor 14 may be read manually or it may transmit an electrical signal that corresponds to the relative humidity. Relative humidity, as measured by humidity sensor 14, is the basis for selecting the amount of additive from reservoir 2 or 3 that is added to the composition held in reservoir 1 (column 3, line 13 through column 4 line 5). The spray device may include a conventional air atomizing spray device, an electrostatic air atomizing spray device or an electrostatic rotary atomizing device (column 5, lines 1-3). The proportionate flow rates of water and the coating composition are selected to provide a predetermined evaporation rate of water from the coating under environmental conditions in spray area 13 (column 7, lines 11-18).

In contrast, claim 1 as previously amended, recites in part:

providing a spray device ... said housing partially surrounding said spray device, said housing having a vapor supply line located substantially opposite from the direction of spray of said spray device, said vapor supply line directing a moistening atmosphere toward the back of said spray device.

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 1762

(Emphasis added) Applicant submits that such an invention is neither taught, disclosed nor suggested by Sundholm et al., Rosenberger et al. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Sundholm et al. and Rosenberger et al. each teach the spraying of coatings. However, Sundholm et al. and Rosenberger et al., separately or in combination, fail to disclose or suggest providing a spray device with a housing partially surrounding the spray device, the housing also having a vapor supply line located substantially opposite from the direction of spray of the spray device, the vapor supply line directing a moistening atmosphere toward the back of the spray device, as is recited in part in amended claim 1. The Examiner indicates that from the figure of Rosenberger et al. shows "that the vapor is supplied into the spray booth from the opposite direction of the spray and into the back of the spray device." Applicant respectfully points out that the supply line leading to spray device 11 is a liquid supply line that leads from static mixer 10, rather than a vapor supply line, as is recited in claim 1. Further, Applicant respectfully points out that the supply line of Rosenberger et al. delivers liquid to spray device 11 rather than directing a moistening atmosphere toward the back of the spray device, as is recited in claim 1.

An advantage of Applicant's invention over Sundholm et al. and Rosenberger et al. and the other cited references is that the housing prevents dispersion of the vapor. Another advantage of the Applicant's invention is that the flow of the vapor comes around the spray device from behind the back of the spray device toward the fiber web. Accordingly, Applicant submits that claim 1, and claims 2-4, 8, 10 and 11 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 1-4, 8, 10 and 11 under 35 U.S.C. §103(a) as being unpatentable over Sundholm et al. in view of U.S. Patent No. 4,396,651 (Behmel et al.),

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Applicant respectfully traverses the rejection and submits that claims 1-4, 8, 10 and 11 are in condition for allowance.

Behmel et al. disclose a process for spraying water-dilutable paint including two-component spray guns whereby the outlay of the spray nozzles guarantees a thorough blending of the two components to provide a uniform film formation. The ancillary nozzles are mounted in order that the droplets of the material atomized by the nozzles either covers the main paint stream and/or blends with the droplets of the main stream without melting or blending homogeneously therewith (column 2, lines 46-55). Along with the atomization of paint, a quantity of water is atomized as adjusted by the humidity and/or spray room temperature, thereby creating a micro-climate. Additives are applied through ancillary nozzles directly and immediately to the surface of the paint droplets (column 3, lines 8-27).

In contrast, claim 1 as previously amended, recites in part:

providing a spray device ... said housing partially surrounding said spray device, said housing having a vapor supply line located substantially opposite from the direction of spray of said spray device, said vapor supply line directing a moistening atmosphere toward the back of said spray device.

(Emphasis added) Applicant submits that such an invention is neither taught, disclosed nor suggested by Sundholm et al., Behmel et al. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Sundholm et al. teach the spraying of a slurry onto paper under pressure. Behmel et al. teach the spraying of water-dilutable paint using two-component spray guns. However, Sundholm et al. and Behmel et al., separately or in combination fail to disclose or suggest providing a spray device with a housing partially surrounding the spray device, the housing also having a vapor supply line located substantially opposite from the direction of spray of the spray device, the vapor supply line directing a moistening atmosphere toward the back of the spray device, as is

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Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 1762

recited in part in amended claim 1. The Examiner states that the ancillary nozzles may be situated in a configuration that reads on the present invention. However, Behmel et al. situates the nozzles to the side of the main spray nozzle to supply liquids within and/or around the paint stream coming from the main nozzle. Applicant respectfully points out that the vapor supply line of the present invention directs a moistening atmosphere toward the back of the spray device, which is different than the invention of Behmel et al., in that the ancillary nozzles situated to the side of the main spray nozzle as in Behmel et al. cannot be arranged to direct a moistening atmosphere toward the back of the spray device and still supply liquids within the paint stream coming from the main nozzle as disclosed by Behmel et al.

An advantage of Applicant's invention over Sundholm et al. and Behmel et al. and the other cited references is that the housing prevents dispersion of the vapor. Another advantage of the Applicant's invention is that the flow of the vapor comes around the spray device from behind the back of the spray device toward the fiber web. Accordingly, Applicant submits that claim 1, and claims 2-4, 8, 10 and 11 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicant submits that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicant respectfully requests withdrawal of all rejections and allowance of the claims.

In the event Applicant has overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicant hereby conditionally petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095,
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PATENT
Reply under 37 CFR 1.116
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Group 1762

Should any question concerning any of the foregoing arise, the Examiner is invited to
telephone the undersigned at (260) 897-3400.

Respectfully submitted,



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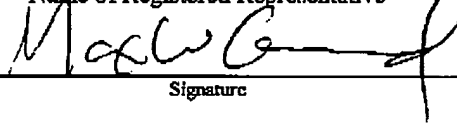
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I hereby certify that this correspondence is being transmitted via facsimile
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Name of Registered Representative



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